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REMARKS

Claims 1 and 17 have been amended to more particularly point out and more distinctly claim the subject matter that the applicants regard as their invention.

At the outset, the examiner objected to the drawings on the ground they did not show an electric motor having a rotatable drive shaft that has an axis that is parallel to the axis of toothed rack 10. The examiner apparently construed shaft 6 as the motor drive shaft, and noted that shaft 6 has an axis that is substantially perpendicular to that of toothed rack 10.

It should initially be noted that § 113 of the patent statute only requires a drawing "where necessary for the understanding of the subject matter sought to be patented." And the first paragraph of § 112 of the patent statute requires that the description of the invention in the specification be such "as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same...." In that regard it is respectfully urged that one skilled in the art would appreciate that shaft 6 is not the electric motor drive shaft, as suggested by the examiner's drawing objection. Indeed, those skilled in the art know that electric motors are rotary output devices that provide power from a rotating output drive shaft that extends directly from the motor housing. As described in the present specification in paragraph [0019] and as clearly illustrated in drawing Figures 1 and 2, electric motor 3 is assembled to a transmission housing 4 that includes a worm gear drive in which the worm is carried by the motor shaft and meshes with a worm gear.

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Those skilled in the art would know that a worm gear drive as disclosed in the present application is a right angle drive, as is apparent from the structure shown in Figure 1. And they would further know that the rotary motion provided by the worm carried by the motor output shaft is transmitted to the worm gear. The specification discloses that the worm gear is coupled with the further gear 5, also shown in Figure 1. Quite obviously, gear 5 is shown as a spur gear, and based upon the disc-like shape of transmission housing 4 the worm gear is also a spur gear.

The specification also discloses that shaft 6, to which the examiner referred, is not the motor drive shaft, but is instead the shaft that carries further gear 5 (as is apparent from Figures 1 and 2) which meshes with toothed rack 10. Clearly, those skilled in the art would appreciate that rotary output from motor 3 is transmitted to the worm gear system within transmission 4, where it undergoes a gear reduction, and that rotary motion is transmitted to further gear 5 to provide another gear ratio.

It is respectfully urged that the description in paragraph [0019] of the specification coupled with the structure illustrated in Figures 1 and 2 would clearly enable one skilled in the art to make and use the claimed invention, which satisfies the statutory requirements. Accordingly, the objection to the drawings is respectfully requested to be withdrawn.

Turning now to the claims, the indefiniteness rejection of claim 17 is believed to have been overcome. The amendment to claim 17 replaces the term "transmission" with the words "gear drive system," which distinguishes over the

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term "transmission" as it appears in claim 1.

Claims 1, 2, 11, 12, 13, 15, and 17 were rejected as anticipated by the Yamano et al. reference. In the course of discussing the reference, the examiner characterized element 8 and 9 of that reference as a toothed rack. However, those elements are identified in the reference as an internally threaded propulsion screw and a propulsion rod, respectively. Those skilled in the art would appreciate that there is a significant structural difference between a toothed rack and an externally threaded screw. A rack is intended for linear movement while a screw is intended for rotational movement. And the Yamano et al. reference neither shows nor suggests a toothed rack element that is slidably received within a first receptacle. Indeed, if screw 7 is the toothed rack, any axial linear movement would cause gear 6 to strike helical gear 26 or the adjacent internal projection formed in the housing wall.

Moreover, the Yamano et al. reference does not show a gear that is in meshing engagement with a toothed rack. Instead, it shows a gear 6 carried on the end of a threaded propulsion screw 7, wherein gear 6 is in meshing engagement with a helical gear 27. Neither of gears 6 or 27 moves screw 7 linearly within cylindrical member 11, but merely rotates it so that it can move internally threaded propulsion rod 9 which is an entirely different structural arrangement from that claimed herein. Additionally, the Yamano et al. reference does not disclose a structural arrangement in which an electric motor and a gear that engages a toothed rack are provided as a pre-assembled unit that is removably connected with a housing that includes an axially-extending first

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rec ptacle, as claimed in claim 1. In fact, as illustrated in Figures 1 through 3 of Yamano et al. '491, the structure involves a unitary, integrally formed housing, not one involving a removable connection between a pre-assembled motor and gear unit and a separate housing, as claimed. Consequently, the Yamano et al. reference does not show the claimed invention, nor does it even remotely suggest it.

Claims 2, 11, 12, 13, 15, and 17 each depend from claim 1, either directly or indirectly, and therefore the same distinctions as are noted above in connection with claim 1 apply with equal effect to each of those dependent claims. Additionally, those dependent claims recite additional structural features that further distinguish the invention as so claimed in those claims from the teachings of the Yamano et al. reference.

Claims 1, 2, 11, 12, 13, 15, 16, and 17 were rejected as anticipated by the published Esly et al. application. In that regard, it is respectfully urged that Esly et al. is not an effective reference against the present application because it is owned by the same entity that owns the present application. The Esly et al. publication is owned by LuK Lamellen und Kupplungsbau GmbH, and the present application is owned by LuK Lamellen und Kupplungsbau Beteiligungs KG. However, those are one and the same entity, as evidenced by the recorded change of name referred to in the attached true copy of the first page of the NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT, dated July 29, 2002, which identifies the former and new names of the entity that owns each of the Esly et al. application and the present application. Also attached is a true

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copy of the first page of the NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT, dated May 16, 2002, identifying the owner of the present application. Under subsection (c) of § 103 of the patent statute, subject matter in a published application that is commonly owned by the same owner does not preclude patentability, and therefore the Esly et al. publication is not an effective reference against the present application. Additionally, the present invention is directed to a clutch actuator, whereas the Esly et al. publication is directed to a transmission actuator.

Claims 1 through 11 and 17 were rejected as obvious based upon the Piao and Yamano et al. references. The Piao reference is drawn from a non-analogous arts in that it relates to a water flow control device. And although the examiner recognized that discloses an actuating arrangement that includes a rack, she acknowledged that that reference does not disclose that the motor and gear are provided as a pre-assembled unit. But as was the case with the Yamano et al. reference, the Piao reference shows a unitary, integrally-formed housing, not one involving separate receptacles as claimed.

Moreover, it is not at all apparent why one faced with a space problem involving a motor vehicle clutch or transmission actuator would look to the water flow control art for inspiration. And even if one having only ordinary skill in the art had before him the Piao reference, there is no teaching or motivation as to which elements from that reference should be combined with which elements from Yamano et al., and which elements are to be ignored or discarded. In fact, the only motivation for combining the references as the

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examiner has done is the present disclosure. And to use against an inventor that which only he has taught involves an improper hindsight reconstruction of the prior art while using the inventor's disclosure as a road map or a template with which to piece together disparate parts of disparate references.

Claims 2 through 11 and 17 each depend from claim 1, and therefore the same distinctions that apply relative to claim 1 apply with equal effect to each of those dependent claims. Additionally, those dependent claims recite additional structural features that further distinguish the invention as so claimed in those claims from the teachings of the references relied upon.

Claims 1, 2, and 11 through 13 were rejected as obvious based upon the Cotter, Yamano et al., and Darnell references. The Cotter '290 reference, which is directed to a lifting apparatus, was cited for showing an actuator including a toothed rack, but was acknowledged to be deficient in that it did not disclose an electric motor or that an electric motor and gear are provided as a pre-assembled unit. In that regard, the Darnell '593 reference was cited for showing an electric-motor-driven rack arrangement for a lifting device.

Neither of the three references individually shows or suggests the claimed invention. And the Cotter and Darnell references are drawn from entirely different fields from that to which the claimed invention relates. In that regard, it is not apparent why one faced with a space problem involving a motor vehicle clutch or transmission actuator would look to the lifting device art or to the seat belt motor art for inspiration in solving such a motor vehicle space limitation problem.

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Even if one having only ordinary skill in the art had before him each of the Cotter, the Yamano et al., and the Darnell references, there is no teaching or motivation in any of those references that would lead one having only ordinary skill in the art to take particular elements from one reference and combine them with particular elements from either of the other references. Nor is there any teaching or suggestion concerning which elements of which references are to be ignored or discarded. Again, the only motivation for combining those three references as the examiner has done is the present disclosure. And to use against an inventor that which only he has taught involves an improper hindsight reconstruction of the prior art while using the inventor's disclosure as a road map or a template with which to piece together disparate parts of disparate references.

Claims 2 and 11 through 13 each depend from claim 1, and therefore the same distinctions that apply relative to claim 1 apply with equal effect to each of those dependent claims. Additionally, those dependent claims recite additional structural features that further distinguish the invention as so claimed in those claims from the teachings of the references relied upon.

Applicants' attorney notes with appreciation the indication of allowability of the subject matter of claim 14. However, all the claims are believed now to be allowable.

Based upon the foregoing amendments and remarks, the claims as they now stand in the application are believed clearly to be in allowable form in that they patently distinguish over the disclosures contained in the references that

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were cited and relied upon by the examiner, whether those references be considered in the context of 35 U.S.C. § 102 or of 35 U.S.C. § 103. Additionally, it is believed that the drawing objection should be withdrawn. Finally, that amended claim 17 is now in definite form. Consequently, this application is believed to be in condition for allowance, and reconsideration and reexamination of the application is respectfully requested with a view toward the issuance of an early Notice of Allowance.

The examiner is cordially invited to telephone the undersigned attorney if this amendment raises any questions, so that any such question can be quickly resolved in order that the present application can proceed toward allowance.

Respectfully submitted,



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October 29, 2003

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Attachments:

NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT, dated July 29, 2002; and
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT, dated May 16, 2002.



UNITED STATES
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JULY 29, 2002

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DOC DATE: 02/21/2002

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